

# Patent claims

1. A transceiver for data signals, in particular radio data signals, comprising:  
a transmitting section (6) which conditions input data for transmission over a communication link containing a plurality of channels,  
a receiving section (12) which receives signals from one of the channels and processes them into output data,  
a channel switching device (10) connected to the transmitting section and receiving section,  
a channel hopping sequence program part (22) in which a plurality of predetermined channel hopping sequences are programmed, a predetermined channel hopping sequence being associated with the transceiver as an address,  
a channel selecting device (20) which controls the channel switching device (10) in accordance with one of the predetermined channel hopping sequences, and  
a clock device (24, 26) for operating the channel selecting device (20), the clock device being synchronized by a public time signal (radio clock) to synchronize channel hopping between a transmitting and a receiving transceiver with the aid of the public time signal.
2. A transceiver according to claim 1, characterized in that the clock device (24, 26) has a clock (26) for generating an operating clock signal for the channel selecting device, the frequency of the clock signal outputted by the clock being 100 kilohertz ... 10 megahertz, preferably approximately one megahertz.
3. A system for transferring data signals with transceivers according to claim 1, wherein a unique identification number is associated with each transceiver to define a certain channel hopping sequence for the transceiver, the identification number inputted by a transmitting device determining the predetermined channel hopping sequence of the received device both in the transmitting device itself for connection setup.
4. A system according to claim 3, characterized in that all possible channel hopping sequences are stored in the program part.
5. A system according to claim 4, characterized in that the channel hopping sequences are calculated from the selected identification number on the basis of an algorithm.

6. An apparatus for processing transmit and receive signals for installation in a transceiver to obtain a transceiver according to either of claims 1 and 2 or a system according to any of claims 3 to 5, having the channel switching device, the channel hopping sequence program part, the channel selecting device and the clock device.
7. A data transfer device for installation in a communication device which sends data to another device and/or receives data from the other device over one of a given number of channels, in particular frequency channels, comprising the following features:
  - a channel switching device (10),
  - a channel hopping sequence program part (22) in which a plurality of predetermined channel hopping sequences are programmed, a predetermined channel hopping sequence being associated with the data transfer device,
  - a channel selecting device (20) which controls the channel switching device (10) in accordance with one of the predetermined channel hopping sequences, and
  - a clock device (24, 26) with a synchronizing device for operating the channel selecting device (20),the clock device (24, 26) being synchronized by a public time signal (radio clock).
8. A method for synchronizing transceiving operation between a transmitter and a receiver which are connected over a communication link with cyclically hopping channels, comprising the following steps:
  - the transmitter (A) dials a desired receiver (B),
  - the same channel hopping sequence is adjusted in the transmitter (A) and the receiver (B),
  - transmitter (A) and receiver (B) both receive a public time signal,
  - transmitter and receiver are synchronized by the time signal or a signal derived therefrom by the channel hopping cycle being started on a previously defined channel in synchronism with the time signal both in the transmitter and the receiver.